7

EDUCATED MIGRANTS: IS THERE BRAIN WASTE?

Çağlar Özden

Introduction

The welfare of migrants is one of the key issues that need to be considered when migration policies are evaluated. The literature to date has mostly focused on the assimilation of the migrants in the labor market, mainly through their earnings and wage growth (Chiswick 1978; Borjas 1985, 1994; Jasso, Rosenzweig, and Smith 1998). However, the type of jobs that the migrants obtain is a crucial issue that influences their performance in the destination country. This is especially important for the highly educated migrants. The U.S. Census data indicate that there are striking differences in the occupational attainment of immigrants who have similar education backgrounds but are from different countries. Highly educated immigrants from certain countries are less likely to obtain skilled jobs. Among the lowest likelihood of obtaining skilled jobs are migrants from several Latin American, Eastern European, and Middle Eastern countries.

In this chapter, we first present an analytical model that identifies the main determinants that lead to these differences. The key differences are the probabilities of successfully entering a destination country for migrants from different countries and different education backgrounds. Then we present a simple empirical analysis that tests the predictions of the theoretical model. Among these predictions are attributes that affect the quality of human capital accumulated at home. Examples are expenditure on tertiary education and the use of English as a medium of education. Other attributes lead to a selection effect—these variables have differing effects on migrants with different skill levels. These include the gross domestic product (GDP) per capita, the distance to the United States, and the openness of U.S. immigration policies to residents of a given country. Finally, among the most important variables is the ease with which people with different education backgrounds can migrate to other countries. Our empirical analysis

shows that all of these variables have significant effects on the professional placement of educated migrants in the United States.

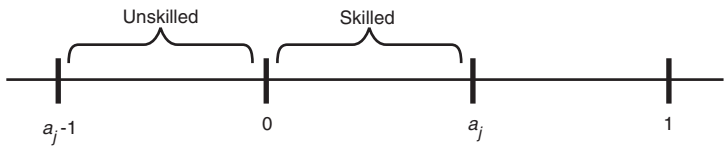
How immigrants perform in host country labor markets is one of the fundamental questions in the migration literature (Borjas 1994). The existing literature focuses primarily on earnings as a measure of performance. We examine, instead, occupational outcomes, particularly of the highly educated and those with professional qualifications. Earnings do not reveal what immigrants actually do, although they are likely to be correlated with occupational choices. If the global creation and allocation of human capital are a concern, then it is of interest what kind of jobs the highly educated immigrants obtain. For example, if most university graduates or professionals from a country obtain unskilled jobs when they migrate, then obtaining a better sense of their eventual destiny may help them and their countries improve their allocation of expenditures on education and training (see Mountford 1997 for an analysis of the impact of brain drain on sending countries).

Model

Suppose the college graduates in country j are uniformly distributed over the range $[a_j-1, a_j]$ in terms of the value of their human capital in the country into which they emigrate. Thus, the measure of population is normalized to 1 and the average human capital level in country j is given by $a_j-1/2$. Without loss of any generality, we assume $a_j<1$ and only the people with human capital level above 0 are able to obtain skilled jobs in the destination country. The workers in the range $[a_j-1,0]$ would be placed in unskilled jobs and the ones in $[0,a_j]$ would obtain skilled jobs if they were to emigrate. We can interpret a_j as the country-specific human capital index, because higher a_j implies that a higher portion of the workers obtain skilled jobs. Figure 7.1 below represents the distribution of a_j over the relevant range.

We assume that the labor market in the destination country is efficient. The human capital level of each migrant worker is correctly identified in the market,

FIGURE 7.1 Distribution of a_j



and he or she is placed in an appropriate job. However, we can only observe their diploma in the census data, not their individual human capital.

The probability of migrating to the north is influenced by various factors. Some of these depend on the individual migrant—such as the ability to finance the trip or the willingness to be away from home. Other factors are specific to the home country or the community to which the migrant belongs—such as the support provided to migrants or the presence of official or informal social networks in the destination country, which would help with problems of settling and adjustment. Finally, there are the migration policies of the destination country—whether there are specific policies and programs targeting certain source countries, professions, and skills or allowing family reunification. To simplify the model, all of these factors can be represented by a single probability for each individual. More specifically we assume that the probability of entering the destination country is denoted by p_j, if the human capital of the migrant is in $[a_j-1, 0]$, and is given by q_j, if the human capital level is in $[1, a_j]$. All of the Organisation for Economic Co-operation and Development (OECD) countries, which accept significant number of migrants, have policies in place that discriminate in favor of skilled and educated migrants. So, we assume that $q_j > p_j$. We should emphasize two points. First, these probabilities reflect all types of migration, legal or illegal, based on family preferences or job qualifications. Second, these are also source-country-specific variables. It is possible that lower-skilled migrants from country j might be able to emigrate more easily compared with highly skilled people from another country. This possibility might be the result of geographic proximity, language, cultural compatibility, or the presence of established migrant communities, which lowers migration costs. For example, it is probably easier for a lower-skilled Mexican to migrate to the United States compared with a more highly skilled Ethiopian.

In this simple model, the total number of migrants from country j is given by $[1 - a_j]p_j + a_jq_j$ when we normalize the population of the country to 1, as we assumed at the beginning of this section. The ratio of migrants who obtain skilled jobs is given by $\dfrac{a_jq_j}{[1 - a_j]p_j + a_jq_j}$. This is the main variable we presented in figure 7.1 in the previous section, which we can obtain from the U.S. Census data. This ratio is increasing in a_j; as the average level of human capital in country j is increased, a higher portion of the migrants are placed in skilled jobs. It is also increasing in q_j and decreasing in p_j. If the probability of migrating successfully increases for people who have higher (lower) human capital, then the ratio of migrants in skilled jobs increases (decreases) for country j. The key issue is to determine the kind of factors influencing these three variables. We mentioned some of these factors above; identifying their relative importance forms the basis

of our empirical analysis in the following section. Before proceeding to the empirical analysis, however, we extend the model in one more direction.

The most difficult decision for a migrant is probably the decision whether to migrate itself. However, as equally important is the decision on where to migrate. Most OECD countries provide attractive opportunities, particularly for highly skilled or educated migrants. Less-skilled migrants (or even illegal migrants) have many different options when the migration decision is made. When we observe the migration levels and compositions, say, for the United States, we need to take into account the migration opportunities in Europe, Canada, and Australia. For example, if Japan were to significantly relax its migration policies overnight, this policy shift could have a large effect on the migration flows from other Asian countries into the United States, Canada, and Australia.

We now modify our model slightly to incorporate the option to migrate to a second country. To keep the model simple, we assume that the wage levels and the labor market placement (skilled versus unskilled jobs) are identical in both destination countries for a given level of human capital. The only difference is the probability of successful migration from country j to either destination country. Assume the two destination countries are labeled as x and y. The probability of migration from country j to country x is given by p_j^x and q_j^x for people with low and high levels of human capital, respectively. We again assume that $p_j^x < q_j^x$, but it is possible to have $q_j^x < p_j^y$. In other words, it is possible that it is easier for people with lower levels of human capital to migrate to country y compared with people who have higher levels of human capital migrating to country x. For example, it is probably the case that it is easier for unskilled Mexicans to migrate to the United States than it is for skilled Mexicans to migrate to Japan.

Under this new scenario with multiple destinations, the portion of migrants with low human capital (in the range $[a_j - 1, 0]$) who migrate to country x is given by $\dfrac{p_j^x}{p_j^x + p_j^y}$. There is a similar ratio for migrants with high human capital. Then, the number of migrants in country x is given by $[1 - a_j]\dfrac{p_j^x}{p_j^x + p_j^y} + a_j\dfrac{q_j^x}{q_j^x + q_j^y}$ and the ratio of immigrants in country x from country j who obtain skilled jobs is given by the following:

$$r_j^x = \left[a_j \frac{q_j^x}{q_j^x + q_j^y} \right] \Big/ \left[[1 - a_j]\frac{p_j^x}{p_j^x + p_j^y} + a_j \frac{q_j^x}{q_j^x + q_j^y} \right] \tag{7.1}$$

The effect of the overall level of human capital in country j, a_j, and the probabilities of migration, p_j^x and q_j^x, on this expression are the same as before. The

interesting issue is the effects of migration probabilities to country y on the labor market placement of migrants in country x. When p_j^y increases—that is, when it becomes easier for people with low levels of human capital to migrate to country y—the average human capital level of migrants from country j to country x increases. This, in turn, increases the portion of migrants placed in skilled jobs. An increase in q_j^y has the exact opposite effect for the same rationale. For example, if it becomes easier for unskilled Tunisians to migrate to France, then the average human capital level of Tunisians migrating to the United States will increase along with their average job market performance.

This simple analytical model identified the main forces that shape the "average placement" of migrants in the labor market of a destination country. The following forces increase the portion of migrants placed in skilled jobs: (a) the overall human capital level of the sending country, a_j; (b) the ease of migration to that country for people with high human capital levels, q_j^x; and (c) the ease of migration to other destination countries for people with low human capital levels, p_j^y. Conversely, the following decreases the overall placement level of migrants from a given country: (a) the ease of migration to that country for people with low human capital levels, p_j^x; and (b) the ease of migration to other destination countries for people with high human capital levels, q_j^y. All of these forces are quite intuitive. Before proceeding to the empirical analysis that aims to identify the variables that capture these effects, we need to mention an implicit assumption in the model and the following empirical analysis. The model assumes that the migrants are randomly selected among their respective populations (low skill or high skill). This is a rather strong assumption that might limit the analysis. However, without explicit knowledge about the labor market performance of the migrant in his or her home country, it is rather difficult to overcome it. Unfortunately, the U.S. Census does not provide such data.

Data

Although there is a substantial body of theoretical literature on the brain drain (see Bhagwati and Hamada 1974; Bhagwati and Partington 1976; Stark, Helmenstein, and Prskawetz 1997), the scarcity of data imposes significant restraints on empirical analysis. Chapter 5 by Docquier and Marfouk in this volume is an important contribution in this respect, and we use some of the data described there. Additionally, U.S. Census data provides detailed social and economic information on foreign-born people in the United States. The data relating to the immigrants in the United States are from the 1 percent sample of the 2000 U.S. Census.[1] The U.S. Census data are restricted to foreign-educated males who are between 25 and 65 years old and employed at the time of the census.[2] Each indi-

vidual observation in the census has a population weight attached to it, which is that representative observation's proportion in the overall U.S. population.

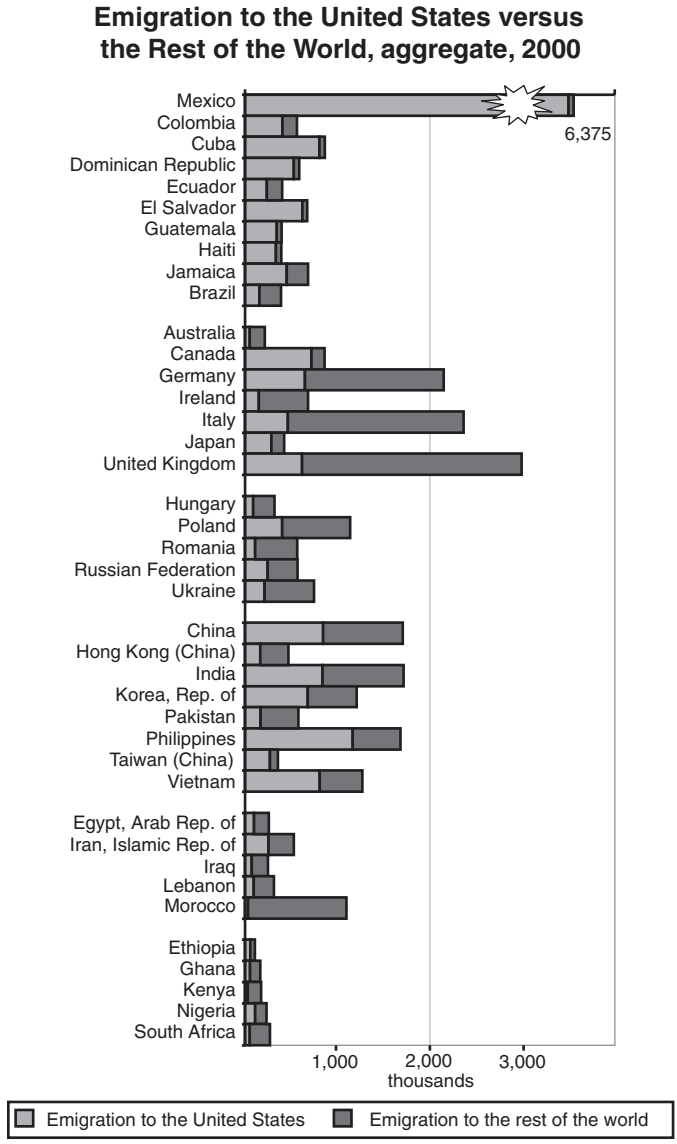
We end up with more than 200,000 observations in our data set, which corresponds to around 4.5 million people in the United States. Each individual in the census declares an education level and a profession. For simplicity and to have concordance with other data sources, we divide the migrants into two groups—people with at least a bachelor's degree and people without a bachelor's degree. There are more than 500 separate occupations in the census and we group them into two main categories, which are based on the job description and the average educational attainment.[3] The categories are as follows:

- High Skilled—The average education for all workers in these categories is a minimum of 16 years and includes professionals, scientists, managers, accountants, engineers, social workers, and teachers.
- Less Skilled—The average education for workers in these categories is less than 16 years and includes technicians, police, secretaries and administrative assistants, waiters, salespersons, cashiers, construction laborers, automotive mechanics, and drivers.

The following graphs present basic migration patterns from the Docquier and Marfouk (chapter 5 in this volume) data and the U.S. Census data (2000). Figure 7.2 is the total migration from a group of select source countries to the United States and the rest of the world. The largest migrant-sending country in the world is Mexico, and almost all of these migrants go to the United States. A large portion of the population of several Western European countries also emigrates in large numbers. We should note that this reflects intra-European migration, which is rather different from migration from developing countries. We see that migrants from Latin America mostly come to the United States, whereas migrants from Eastern Europe, the Middle East, and Africa prefer Western Europe. The portion of migrants from Asia to the United States is slightly above 50 percent.

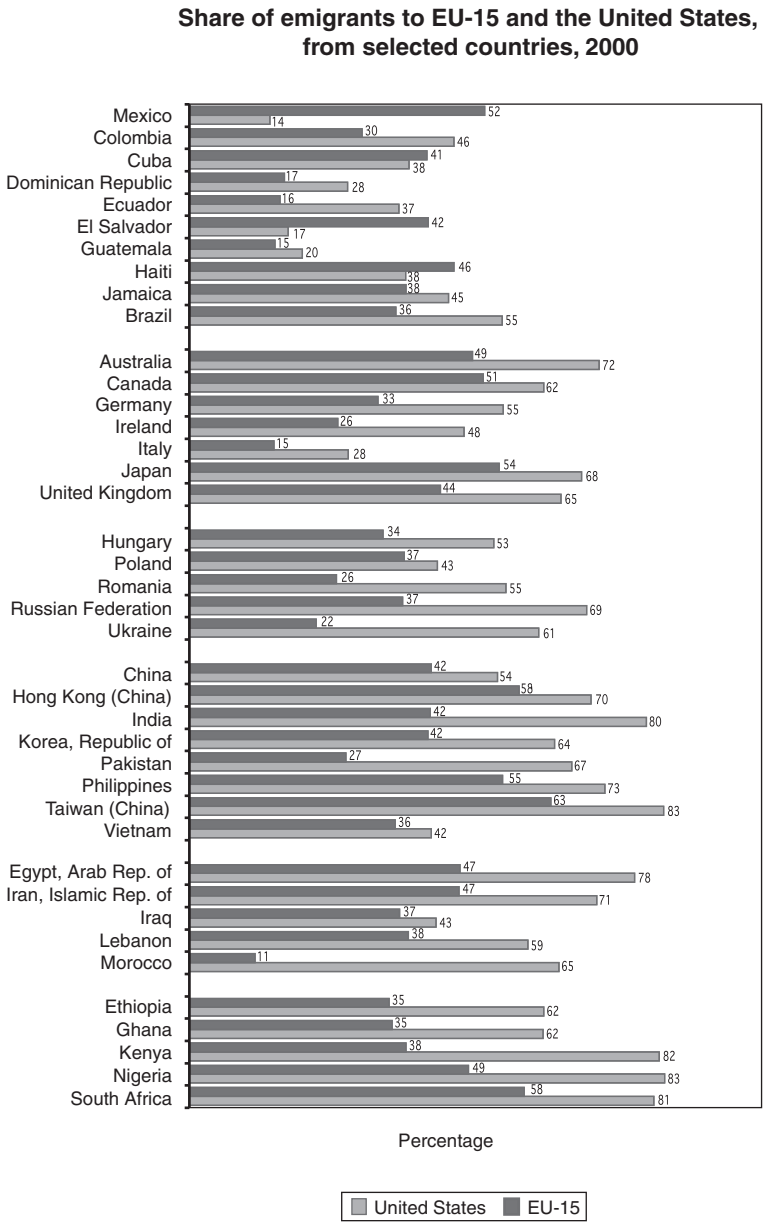
In terms of the education composition of the migrants, in figure 7.3, we see that a large portion of Latin American migrants have very low levels of education, whereas the European migrants are highly educated. The portion of the migrants with tertiary education from other regions exhibits wide variation. For the Middle East and many African countries, it is actually above 50 percent, whereas it is slightly below 50 percent for Eastern Europe and around 40 percent for Asia. There are two factors that influence the education composition of migrants. The first factor is the prevalence of tertiary education in the native population, and the second factor is the incentives to migrate among different education levels. There

FIGURE 7.2 Migration Patterns from Select Countries



Source: Docquier and Marfouk (this volume).

FIGURE 7.3 Migration Patterns from Select Countries for People with Tertiary Education



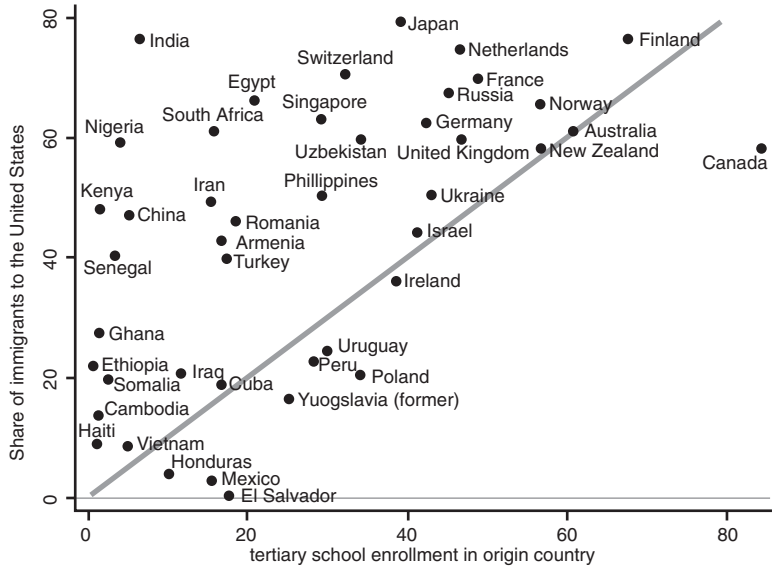
Source: Docquier and Marfouk (this volume).

are many studies indicating that it is generally easier for middle-class and relatively educated people to migrate (figure 7.3 confirms this).

Another important pattern emerging from figure 7.3 is how the educated migrants from a given source country are divided among different destination countries. As mentioned above, we see that the majority of migrants from Latin America come to the United States, whereas African and Middle Eastern migrants predominantly prefer Europe. However, migrants from Africa and the Middle East to the United States are more educated compared with migrants from the same regions to Europe, as seen in figure 7.3. The same pattern holds for migrants from Asia and Eastern Europe, but this is not the case for Latin American migrants. These patterns are likely to be caused by the ease of migration for potential migrants with different education levels to different destinations.

Figure 7.4 compares the education composition of migrants to the United States with the native population in a select group of countries. The vertical axis represents the portion of the migrants who arrived in the United States in the 1990s and who hold a tertiary degree. The horizontal axis is the portion of the population who is enrolled in tertiary education for the appropriate age group. We are comparing the education levels of migrants to the tertiary education enrollment

FIGURE 7.4 Tertiary Education at Home and among Immigrants to the United States, 1990s

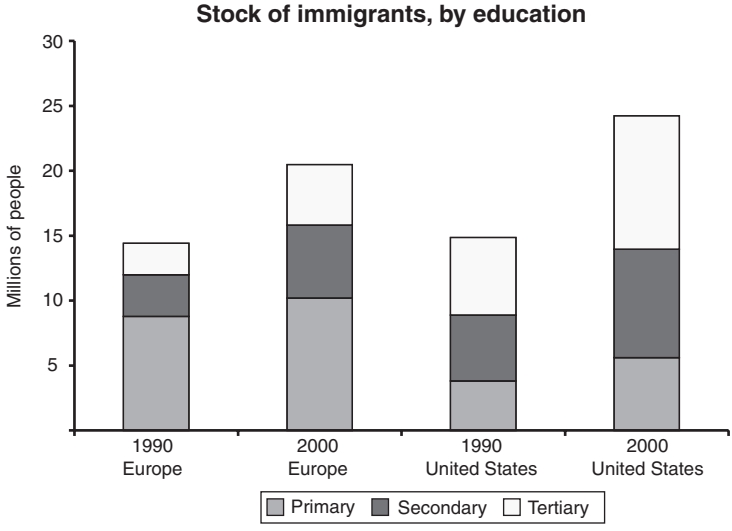


Source: World Bank 2005.

rate, rather than overall tertiary education level, because the migrants tend to be younger and emigrate during or following the completion of their education. Figure 7.4 tells us that the education level among Latin American immigrants is even lower than the average levels in their home countries. Conversely, immigrants from Africa, the Middle East, and Asia to the United States are more educated than the Latin American immigrants and their fellow citizens. This confirms that immigrants do not constitute a random sample from the population of their home countries.

Finally, we present the education composition of all migrants in the United States and Europe in 1990 and 2000. It is interesting to note that the migrant stocks are quite similar in total. However, the European numbers include intra-European flows as well, which implies that migration from developing countries to the United States is much higher than the migration to the European Union countries. However, despite the relatively large share of migrants from developing countries, migrants to the United States are relatively more educated. This selection effect might be the result of the relative ease with which highly educated people can migrate to the United States. The labor market and migration policies

FIGURE 7.5 Composition of Migrants to Europe and the United States by Education



Source: Docquier and Marfouk this volume.

seem to favor the more educated in the United States, especially when compared with Europe.

Empirical Framework

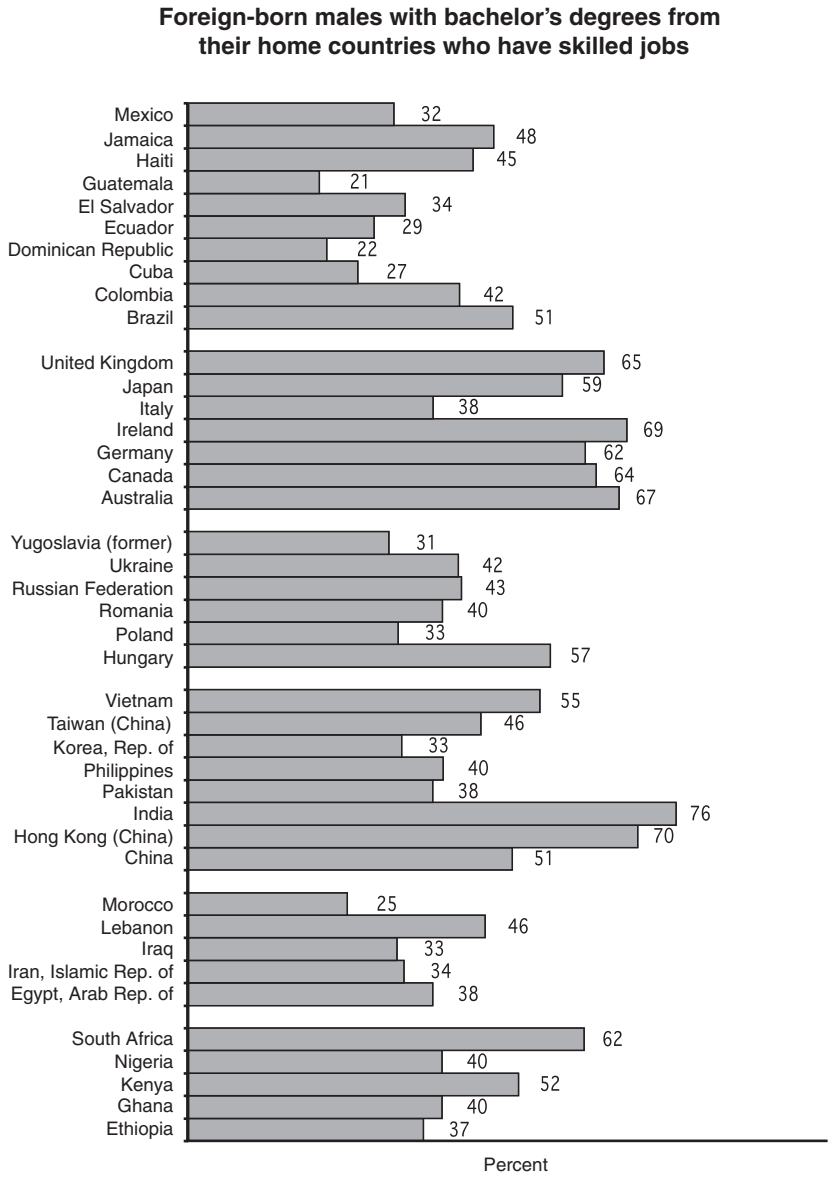
Our empirical framework is designed to test the implications of the analytical model presented earlier. We first calculate the portion of the migrants with tertiary education who obtained skilled jobs. To isolate cohort effects, we focus only on migrants who arrived in 1990s. We also perform the empirical tests separately for the people who are employed so that we can exclude students. We calculate this ratio for each country and present some of them in figure 7.6. It is evident that these ratios vary significantly across countries. The likelihood of obtaining skilled jobs is lowest for Latin American countries and highest for European and Asian migrants. There are large variations across countries of origin even when individuals have identical age, experience, and nominal education. Again, some of the lowest probabilities are for Latin American and Eastern European countries. In other words, ostensibly identical education degrees are not treated equally in the U.S. labor market.

Figure 7.6 shows that there is significant variation in the labor market placement of immigrants from different countries, even if they have the same level of education on paper. If the labor market in the United States is efficient and there is no discrimination, then the numbers in figure 7.6 reflect the "average quality" of the immigrants from a particular country. In this section, we aim to identify the determinants of these quality differences by country of origin based on empirical analysis motivated by the earlier theoretical model.

The previous literature (Chiswick 1978; Borjas 1987; Jasso and Rosenzweig 1986) focused on the differences in the earnings of individual immigrants and attempted to provide explanations on the basis of differences in their levels of education and other explanatory variables that typically include source-country attributes. Conversely, we attempt to explain differences in the labor market placement of individuals who have nominally identical levels of education. Furthermore, we introduce factors that influence the migration decision to a specific country—especially the ease of migration to other countries—which contribute to the source-country-specific selection effect.

Quality variables explain why identical education qualifications obtained in different source countries are valued differently in the U.S. labor market. *Selection* variables explain the differences in the abilities of migrants from different source countries, because they are drawn from different segments of the ability distribution. In our theoretical model, this refers to the unskilled versus skilled immigrants.

FIGURE 7.6 Portion of Migrants with Tertiary Education Who Obtain Skilled Jobs, 1990s Arrivals



Source: U.S. Census Bureau 2000.

As our dependent variable, we use the portion of migrants with tertiary education who are placed in skilled jobs in the United States. This is the variable in equation 7.1 and it is presented in figure 7.5 for a group of countries. It is defined as r_{kt}, where k is for country and t is for cohort (1990s arrivals in this case):

$$r_{kt} = \alpha + \beta_1 \text{DIST}_k + \beta_2 \text{CONFLICT}_{kt} + \beta_3 \text{ENGLISH}_k + \beta_4 \text{EDUC\_}exp_{kt} + \beta_5 \text{GDP}_{kt} + \beta_6 \text{ROW\_MIG}_{kt} + \varepsilon_{kt} \quad (7.2)$$

Note that equation 7.2 is estimated only for the 1990s cohort. The explanatory variables are as follows: natural log of the distance to United States (DIST); the presence of military conflict (CONFLICT); English language dummy (ENGLISH); natural log of tertiary education expenditure per student (EDUC_*exp*); natural log of the home-country GDP per capita (GDP); and ratio of immigrants that have migrated to the rest of the world (ROW_MIG).

Among the quality variables, we have the natural log of tertiary education expenditure (EDUC_*exp*) per student during the relevant period adjusted for purchasing power parity and a dummy variable (ENGLISH), which takes the value of 1 if English is among the commonly spoken languages in the home country. Both of these variables should have a positive effect on human capital and lead to more favorable placement in the U.S. labor market.

Among the selection variables, we have a set of source-country variables: natural log of the home-country GDP per capita adjusted for purchasing power parity, distance from the United States (DIST), and a dummy variable (CONFLICT), which reflects the presence of military conflict in the home country during the decade the migrant arrived in the United States.

Instead of just home-country GDP, it would have been preferable to have data on the average earnings of graduates or professionals, and the distribution of such earnings, but such data are available only for a small number of countries. For higher GDP countries, the opportunity cost of migrating is high, and so only individuals with high income potential would emigrate to and remain in the United States. Furthermore, as Borjas (1987) has argued, because the distribution of income in many of the other industrial countries is more equal than that in the United States, we would again expect those at the upper end of home-country distributions to migrate to the United States. For countries with per capita GDP substantially lower than that of the United States, the relative distribution of income is irrelevant, and it can be assumed that both low- and high-ability people would wish to migrate. Conversely, financial constraints in poorer countries might allow only the relatively wealthier people to migrate. Thus, the effect of source-country GDP per capita is likely to matter but the net effect might be ambiguous.

Distance has conventionally been regarded as an important determinant of the cost of migration, which would have a positive selection effect. Furthermore, people from distant countries (such as in Africa or the Middle East) may have closer migration options (such as Europe and the Persian Gulf). If the U.S. labor market rewards human capital relatively more than these other destination countries, then immigrants will again self-select and the United States will attract the higher-quality migrants from distant countries.

The presence of conflict in the home country should lower the threshold of those who would want to migrate because it reduces the opportunity cost of staying. In low-GDP countries, where everybody might have the desire to migrate, military conflict may act as a powerful push factor. Furthermore, political instability might also have a quality effect, causing a decline in education and human capital accumulation of the citizens. So we expect a negative effect of conflict on labor market placement.

The final variable we introduce (ROW_MIG) reflects the other destinations available to potential migrants. These are captured by the probabilities of entering other countries in the theoretical model. In the regression, we use the ratio of immigrants with tertiary education (who went to countries other than the United States) to all citizens with tertiary education—immigrants to the United States, immigrants to the rest of the world, and the ones who did not emigrate. This variable captures the ease of migration to the rest of the world.

The following estimation strategy could be an alternative. A multinomial-logit estimation is performed in the first stage for all migrants with their professional placement as the dependent variable and their individual characteristics as the explanatory variables. In addition, country dummies are included to capture all other effects. The probability of obtaining a specific job is calculated for a representative individual from each country based on the logit estimation results. Then, these probabilities are used as the dependent variables and regressed on country-specific explanatory variables to assess their relative importance. Furthermore, one can obtain other variables of interest and perform similar analysis for different combinations of education levels and job categories. We hope to pursue this approach in a future study.

Empirical Results

In table 7.1, we present the results from an ordinary least squares (OLS) regression with robust standard errors and weighted by the number of immigrants from each country within that education level. We estimate different specifications and do not include the ease of migration variable (ROW_MIGR) initially. In the first column, the dependent variable is the country-specific ratio of immigrants with

TABLE 7.1 Country-Level Determinants of Probability of Obtaining A Skilled Job, 1990s

Dependent variable	Educated migrants in skilled profession	Educated migrants employed in skilled profession
Log of distance to the United States	0.050** (2.53)	0.051** (2.59)
Military conflict	−0.129** (−2.56)	−0.128** (−2.48)
English	0.101** (2.38)	0.109*** (2.73)
Log of tertiary education expenditure per student (PPP adjusted)	0.070** (2.59)	0.067** (2.33)
Log of per capita GDP (PPP adjusted)	−0.016 (−0.52)	−0.024 (−0.74)
Number of observations	101	101
F-statistic	26.45***	24.92***
R-square	0.562	0.556

Sources: U.S. Census Bureau 2000 and World Bank 2005.

Note: Weighted OLS regression with White robust standard errors. t-statistics in parentheses. *** denotes significance at the 1 percent level; ** denotes significance at the 5 percent level; * denotes significance at the 10 percent level. GDP = gross domestic product; PPP = purchasing power parity; OLS = ordinary least squares.

college degrees who obtain a skilled job whereas, in the second column, the dependent variable is the ratio of employed immigrants. We define an individual to be employed if the annual wage income is above $8,000. The purpose of focusing on employed migrants is to isolate the impact of students, but this does not seem to change any of the results. In both cases, distance (DIST), English (ENGLISH), and tertiary education expenditure (EDUC_*exp*) have positive and significant coefficients, while military conflict (CONFLICT) is negative and significant. GDP per capita (GDP) is not significant.

The results imply that immigrants from countries where English is a common language and expenditure on tertiary education is high perform better in the U.S. labor market. This is not surprising as both variables increase the relevant human capital of the immigrants for the U.S. labor market. For example, coming from an English-speaking country increases the likelihood of obtaining a skilled job in the United States by 10 percent for a hypothetical college graduate. Similarly, a 10 percent increase in tertiary education increases the same probability by 7 percent.

TABLE 7.2 Country-Level Determinants of Probability of Obtaining A Skilled Job, 1990s, with European Migration Policy Indicators

Dependent variable	Educated migrants in skilled profession	Educated migrants employed in skilled profession
Log of distance to the United States	0.054*** (3.25)	0.055*** (3.44)
Military conflict	−0.125*** (−2.68)	−0.122*** (−2.63)
English	0.108*** (2.68)	0.118*** (3.16)
Log of tertiary education expenditure per student (PPP adjusted)	0.079*** (2.84)	0.077*** (2.66)
Log of per capita GDP (PPP adjusted)	−0.016 (−0.55)	−0.023 (−0.81)
Share of educated immigrants in ROW as portion of total	−0.409** (2.16)	−0.488** (−2.37)
Number of observations	101	101
F-statistic	26.56***	21.31***
R-square	0.589	0.595

Sources: U.S. Census Bureau 2000 and World Bank 2005.

Note: Weighted OLS regression with White robust standard errors. t-statistics in parentheses. *** denotes significance at the 1 percent level; ** denotes significance at the 5 percent level; * denotes significance at the 10 percent level. GDP = gross domestic product; PPP = purchasing power parity; ROW = rest of world.

Distance has a positive effect on average immigrant quality, suggesting that the effects of migration costs are rather strong. And the negative sign on the coefficient of the military conflict variable (CONFLICT) implies that the average quality of immigrants seem to increase with political stability.

The final issue is the introduction of variables that represent the ease of migration into Europe for a given country. For this, we use the stock of migrants (with tertiary education) in the rest of the world (all countries except the United States) from a given country in 1990 as a percentage of the total population. The presence of a large migrant community from a given country is indicative of relaxed policies as well as support for migration. As the analytical model predicted, the ease of migration to Europe for low-skilled people improves the overall professional per-

formance of migrants to the United States. The reason for this is that Europe attracts more people from the low end of the human capital spectrum. Similarly, if the skilled migrants can more easily migrate to Europe, then the average quality of placement in the U.S. labor market deteriorates.

Conclusion

This chapter develops a theoretical model to investigate the labor market performance of educated immigrants and then uses U.S. Census data for empirical analysis, continued in Mattoo, Neagu, and Özden (2005). We find striking differences among immigrants from different countries of origin. With some exceptions, educated immigrants from Latin America and Eastern Europe perform poorly, especially when compared with immigrants from developing countries in Asia and developed countries. A large part of the variation across countries can be explained by attributes of the country of origin that influence the quality of relevant human capital, such as expenditure on tertiary education and the use of English as a medium of instruction. Performance is also adversely affected by conflict at home, which could have a quality impact (by weakening the institutions that create human capital) and a selection effect (by lowering the threshold quality of immigrants). U.S. immigration policies play a critical role in explaining cross-country variation because a large proportion of immigrants from some countries (such as Mexico) are admitted through family preferences. Among the most important findings of this chapter is that the migration policies and environment of the rest of the world also have a significant impact on cross-country variation. If other countries attract a relatively large portion of the educated population of a source country, then the average quality of migrants to the United States declines along with likelihood of skilled job placement.

Endnotes

1. Extracts from the U.S. Census samples were made through IPUMS (Integrated Public Use Microdata Series), which is a database maintained by Minnesota Population Center at University of Minnesota (http://beta.ipums.org/usa/index.html).

2. The census asks the respondents their level of education, but not where they obtained it. However, we know the age at which the immigrant entered the United States. So based on this information, we designate a person "U.S. educated" if that person arrived in the United States before he or she would have normally finished his or her declared education level. For example, if a university graduate arrived at the age of 23 or older, then he or she is considered "foreign educated."

3. Education attainments were obtained by computing the average years of education in each profession, with all U.S.-born and foreign-born people (males and females) included.

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